

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Keeble et al.

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TITLE: NOVEL FIBER OPTIC TRANSCEIVER

Attorney Docket No.: 30010008US-02

Commissioner for Patents
Washington, D.C. 20231

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January 18, 2002
(Date of Deposit)

Allison Berkman
Name

Allison Berkman
Signature

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the application as follows:

In The Specification

Please amend the specification as follows:

On page 1, at line 2, insert -- Background of the Invention--

-- 1. Field of the Invention --.

On page 1, at line 9, insert --2. Background of the Invention --.

On page 2, at line 17, insert --Summary of the Invention--.

On page 3, at line 21, insert --Brief Description of the Drawings--.

On page 3, between lines 25 and 26, insert -- Figure 1 shows a known optical

transceiver module,--.

On page 4, at line 11, insert -- Detailed Description of the Invention--.

In The Abstract

Please amend the abstract as follows:

A fibre optic transceiver in which the optical components, interface, management functionality and management interface are all integrated on a single module, capable of being plugged into and removed from the telecommunication's parent system includes a housing having disposed therein a transmitter and a receiver. The housing further includes a pair of rails disposed on opposite sides of the housing to enable the module to be plugged into a suitably configured board. The module is designed primarily for use in 10Gbit serial optical systems, but is equally applicable for use in WDM applications, as well as at other speeds and wavelength.

In The Claims

Please amend the claims as follows:

1. (Amended) An optical transceiver module comprising:

a housing having disposed therein a transmitter and a receiver, wherein said housing further comprises a pair of rails disposed on opposite sides of said housing, said rails having a plurality of spring-like fingers arranged to enable said module to be removably inserted into a suitably configured board.
2. (Amended) A module as claimed in Claim 1, wherein electrical connection means are disposed at a back end of said module.
3. (Amended) A module as claimed in claim 1, wherein said housing includes a plurality of fins disposed thereon and arranged to facilitate temperature control of said module.
4. (Amended) A module as claimed in claim 1, wherein said module includes a bezel disposed at a front end of said module, said bezel having a pair of arms each extending from diagonally opposite corners of said bezel.

5. (Amended) A module as claimed in claim 1, wherein said housing comprises an upper half and a lower half sandwiched together, and an electrically conductive gasket disposed there between to facilitate electrical connection between said upper and lower halves.

6. (Amended) An optical transceiver system comprising:

an optical transceiver module including a housing having disposed therein a transmitter and a receiver, wherein said housing further includes a pair of rails disposed on opposite sides of said housing, said rails having a plurality of spring-like fingers arranged to enable said module to be removably inserted into a suitably configured board,

wherein said system further comprises a chassis having said suitably configured board disposed therein, and chassis electrical connector means arranged to receive said module electrical connector means.

7. (Amended) A system as claimed in Claim 6, wherein said suitably configured board is disposed within said chassis on a plurality of mounting means so as to enable air to pass both above and below said module.

8. (Amended) A system as claimed in claim 6, wherein said system further comprises shield means disposed substantially around said module and said system electrical connectors so as to provide electrical connection from said module to said suitably configured board.

9. (Amended) A system as claimed in Claim 8, wherein said shield means includes a plurality of resilient fingers arranged to exert pressure on said housing so as to improve electrical connection between said housing and said shield means.

10. (Amended) A system as claimed in claim 6, wherein a layer of electrically conductive material is disposed on said suitably configured board in an area substantially surrounding said module, so as to further improve electrical connection between said module and said chassis.

11. (Amended) A system as claimed in Claim 10, wherein said layer of

electrically conductive material is comprised of gold.

12. (Amended) A system as claimed in claim 7, wherein said module, said chassis and said suitably configured board are electrically grounded.

13. (Amended) An optical telecommunications network comprising:
an optical transceiver system having:

an optical transceiver module including a housing having disposed therein a transmitter and a receiver, wherein said housing further includes a pair of rails disposed on opposite sides of said housing, said rails having a plurality of spring-like fingers arranged to enable said module to be removably inserted into a suitably configured board,

wherein said system further comprises a chassis having said suitably configured board disposed therein, and chassis electrical connector means arranged to receive said module electrical connector means.

Remarks

Claims 1-13 remain in the application.

The specification has been amended to include headings consistent with U.S. practice.

The Abstract of the Disclosure has been amended to comply with MPEP 608.01(b).

Claims 1-13 have been amended to eliminate reference numbers, multiple dependencies, and the phrase "characterized in that," and to positively claim features previously incorporated by reference.

As such, claims 1-13 have been clarified by amendment for purposes of form. It is respectfully submitted that the amendments to claims 1-13 are neither narrowing nor made for substantial reasons related to patentability as defined by the Court of Appeals for the Federal Circuit (CAFC) in Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 95-1066 (Fed. Cir. 2000). Therefore, the amendments to claims 1-13 do not create prosecution history estoppel and, as such, the doctrine of equivalents is available for all of the elements of claims 1-13.

Consideration and allowance of the application is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

Respectfully submitted,

1-18-02

Date



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Specification

Please amend the specification as follows:

On page 1, at line 2, insert -- Background of the Invention--

-- 1. Field of the Invention --.

On page 1, at line 9, insert --2. Background of the Invention --.

On page 2, at line 17, insert --Summary of the Invention--.

On page 3, at line 21, insert --Brief Description of the Drawings--.

On page 3, between lines 25 and 26, insert -- Figure 1 shows a known optical transceiver module,--.

On page 4, at line 11, insert -- Detailed Description of the Invention--.

In The Abstract

Please amend the abstract as follows:

[The present invention concerns a] A fibre optic transceiver in which the optical components, interface, management functionality and management interface are all integrated on a single module, capable of being plugged into and removed from the telecommunication's parent system[. The optical transceiver module comprises] includes a housing having disposed therein a transmitter and a receiver. The housing further [comprises] includes a pair of rails disposed on opposite sides of the housing to enable the module to be plugged into a suitably configured board. The module is designed primarily for use in 10Gbit serial optical systems, but is equally applicable for use in WDM applications, as well as at other speeds and wavelength.

[Figure 2]

In The Claims

Please amend the claims as follows:

1. (Amended) An optical transceiver module [(1)] comprising:

a housing [(2)] having disposed therein a transmitter and a receiver, [characterized in that] wherein said housing further comprises a pair of rails [(6)] disposed on opposite sides of said housing, said rails having a plurality of spring-like fingers [(260)] arranged to enable said module to be removably inserted into a suitably configured board [(35)].

2. (Amended) A module as claimed in Claim 1, wherein electrical connection means [(7)] are disposed at a back end of said module.

3. (Amended) A module as claimed in [Claims 1-2] claim 1, wherein said housing includes a plurality of fins [(9)] disposed thereon and arranged to facilitate temperature control of said module.

4. (Amended) A module as claimed in [Claims 1-3] claim 1, wherein said module includes a bezel [(3)] disposed at a front end of said module, said bezel having a pair of arms [(20, 22)] each extending from diagonally opposite corners of said bezel.

5. (Amended) A module as claimed in [any preceding Claim] claim 1, wherein said housing comprises an upper half [(110)] and a lower half [(112)] sandwiched together, and an electrically conductive gasket [(115)] disposed there between to facilitate electrical connection between said upper and lower halves.

6. (Amended) An optical transceiver system comprising:

an optical transceiver module including a housing having disposed therein a transmitter and a receiver, wherein said housing further includes a pair of rails disposed on opposite sides of said housing, said rails having a plurality of spring-like fingers arranged to enable said module to be removably inserted into a suitably configured board,

[a module as claimed in any preceding Claim,] wherein said system further comprises a chassis [(30)] having said suitably configured board [(35)] disposed

therein, and chassis electrical connector means [(37)] arranged to receive said module electrical connector means [(7)].

7. (Amended) A system as claimed in Claim 6, wherein said suitably configured board [(35)] is disposed within said chassis on a plurality of mounting means [(250)] so as to enable air to pass both above and below said module.

8. (Amended) A system as claimed in [Claims 6-7] claim 6, wherein said system further comprises shield means [(36)] disposed substantially around said module and said system electrical connectors so as to provide electrical connection from said module to said suitably configured board.

9. (Amended) A system as claimed in Claim 8, wherein said shield means includes a plurality of resilient fingers [(420)] arranged to exert pressure on said housing so as to improve electrical connection between said housing and said shield means.

10. (Amended) A system as claimed in [any of preceding Claims 6-9] claim 6, wherein a layer of electrically conductive material [(400)] is disposed on said suitably configured board [(35)] in an area substantially surrounding said module, so as to further improve electrical connection between said module and said chassis.

11. (Amended) A system as claimed in Claim 10, wherein said layer of electrically conductive material [in] is comprised of gold.

12. (Amended) A system as claimed in [any of preceding Claims 7-11] claim 7, wherein said module [(1)], said chassis [(30)] and said suitably configured board [(35)] are electrically grounded.

13. (Amended) An optical telecommunications network comprising [a system or module as claimed in any preceding Claims.]:

an optical transceiver system having:

an optical transceiver module including a housing having disposed therein a transmitter and a receiver, wherein said housing further includes a pair of rails disposed on opposite sides of said housing, said rails having a plurality

of spring-like fingers arranged to enable said module to be removably inserted into a suitably configured board.

[a module as claimed in any preceding Claim,] wherein said system further comprises a chassis [(30)] having said suitably configured board [(35)] disposed therein, and chassis electrical connector means [(37)] arranged to receive said module electrical connector means [(7)].